

WE CLAIM:

1. An aqueous suspension of a hydrophobic nutrient which comprises,
the nutrient in ester form associated with a dispersion aid selected from the group consisting of a triglyceride, an essential oil extractive, night primrose oil, fish oil, and a mixture of any of the foregoing dispersion aids;
a dispersion agent: and
an aqueous medium into which said associated nutrient is suspended.
2. The suspension as defined in claim 1, wherein said associated nutrient is in a fully dispersed, uniform form in the aqueous medium.
3. The suspension as defined in claim 2, wherein the particles size of said fully dispersed, uniform form ranges from 50 to 400 nm.
4. The suspension as defined in claim 1, wherein said ester is an ester of a nutritional compound selected from the group consisting of (a) a phytosterol selected from the group consisting of stigmasterol, sitosterol, fucosterol, brassicasterol, campesterol, clionasterol, desmosterol, chalinosterol, poriferasterol, and any mixture of the foregoing phytosterols; (b) a phytostanol, selected from the group consisting of e.g. α sitostanol or β sitostanol, campestanol, brassicastanol, clionastanol, stigmastanol, desmostanol, chalinostanol, poriferastanol, 22, 23 dihydrobrassicastanol and any mixture of the foregoing phytostanols; (c) lutein, (d) Coenzyme Q₁₀, (e) isoflavones, (f) and a mixture of any of the foregoing esters.
5. The suspension as defined in claim 1, wherein said triglyceride is selected from the group consisting of sunflower oil, soy bean oil, olive oil, a medium chain triglyceride, selected from the group containing fatty acids ranging from C₆ to C₁₂, and a mixture of any of the foregoing triglycerides.

6. The suspension as defined in claim 1, wherein said essential oil extractive is one selected from the group consisting of orange oil, lime oil, clove oil, oregano oil, peppermint oil, cinnamon oil, and a mixture of any of the foregoing extractives.

7. The suspension as defined in claim 1, wherein said dispersion agent is selected from the group consisting of (a) a lecithin, (b) a hydrocolloid, (c) a surfactant and (d) a mixture of any of the foregoing dispersion agents.

8. The suspension as defined in claim 7, wherein said lecithin is selected from the group consisting of lecithin derived from soybean and lecithin derived from egg.

9. The suspension as defined in claim 7, wherein said hydrocolloid is selected from a group consisting of xanthan gum, starch, pectin, gelatin, guar gum, carrageenan, methylcellulose, hydroxypropyl cellulose and a mixture of the foregoing hydrocolloids.

10. The suspension as defined in claim 7, wherein said surfactant is selected from the group consisting of cetylpyridinium chloride, polysorbate 80, sorbitan monostearate, a polyglycerol ester, a block copolymer of propylene oxide, ethylene oxide and a mixture of any of the foregoing surfactants.

11. A method of rendering a hydrophobic nutritional compound water dispersible, which comprises:

(a) treating an ester form of the compound with a dispersion aid selected from the group consisting of a triglyceride, an essential oil extractive, night primrose oil, fish oil, and a mixture of any of the foregoing dispersion aids, to form a modified nutrient compound;

(b) combining a dispersion agent with said modified nutrient compound in an aqueous medium to form an aqueous suspension; and

treating said aqueous to a high shear force to form a stable aqueous suspension.

12. The method as defined in claim 11, wherein said stable suspension has a mean particle size ranging from 50 to 400 nm.

13. The method as defined in claim 11, wherein said ester is an ester of a nutritional compound selected from the group consisting of (a) a phytosterol, selected from the group consisting of stigmasterol, sitosterol, fucosterol, brassicasterol, campesterol, clionasterol, desmosterol, chalinosterol, poriferasterol, and any mixture of the foregoing phytosterols; (b) a phytostanol selected from the group consisting of α sitostanol, β sitostanol, campestanol, brassicastanol, clionastanol, stigmastanol, desmostanol, chalinostanol, poriferastanol, 22, 23 dihydrobrassicastanol, and any mixture of the foregoing phytostanols; (c) lutein, (d) Coenzyme Q₁₀, (e) isoflavones, (f) and a mixture of any of the foregoing esters.

14. The method as defined in claim 11, wherein said triglyceride is selected from the group consisting of sunflower oil, soy bean oil, olive oil, a medium chain triglyceride selected from the group containing fatty acids ranging from C₆ to C₁₂ and a mixture of any of the foregoing triglycerides.

15. The method as defined in claim 11, wherein said essential oil extractive is one selected from the group consisting of orange oil, lime oil, clove oil, oregano oil, peppermint oil, cinnamon oil and a mixture of any of the foregoing extractives.

16. The method as defined in claim 11, wherein said dispersion agent is selected from the group consisting of (a) a lecithin, (b) a hydrocolloid, (c) a surfactant and (d) a mixture of any of the foregoing dispersion agents.

17. The method as defined in claim 11, wherein said lecithin is selected from the group consisting of a lecithin derived from soybean and a lecithin derived from egg.

18. The method as defined in claim 17, wherein said hydrocolloid is selected from a group consisting of xanthan gum, starch, pectin, gelatin, guar gum, carrageenan, methylcellulose, hydroxypropyl cellulose and a mixture of the foregoing hydrocolloids.

19. The method as defined in claim 17, wherein said surfactant is selected from the group consisting of cetylpyridinium chloride, polysorbate 80, sorbitan monostearate, a polyglycerol ester, a block copolymer of propylene oxide, ethylene oxide and a mixture of any of the foregoing surfactants.

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